

## Range Telephone Cooperative - Montana 5 Year Service Quality Improvement Plan

### Introduction

Range Telephone Cooperative, Inc. is an ETC serving 2 study areas, one in Montana and one in Wyoming. The Montana study area is 11,972 square miles in eastern Montana served by 12 wire centers with 4,314 current access lines. Range has the following wire centers:

Wire Center	Sq. Miles	Access Lines
Ashland	1,423	598
Alzada	949	83
Birney	337	72
Broadus	320	570
Busby	337	253
Decker	804	180
Hysham	1,324	458
Lame Deer	549	1,150
North Broadus	936	119
Rosebud	1,084	320
South Broadus	1,863	302
South Miles City	1,893	199
Total	11,972	4,314

### Current USAC Information

During 2013 Range Montana received the following amounts in support payments broken down as follows:

High cost loop	185,874
ICLS	841,464
CAF	610,050
Total	1,637,388

This 5 year improvement plan is a section of the Company's 2014 Annual Report. It is in compliance with # 54.313(a)(1) adopted in the FCC USF/ICC Transformation Order (11-161).

Range has developed its improvement plan, concentrating on the delivery and continuation of a robust network which provides, at a minimum, the federally required voice and broadband connectivity as stipulated by regulatory rule.

## **5 Year Service Quality Improvement Plan by Year**

For the next 5 years Range will deploy Broadband Loop Carrier (BLC) equipment to support increased bandwidth to its end users and to collapse its legacy circuit switched voice network into its next generation packet switched voice network. The majority of this Plan entails replacing traditional copper T-carrier facilities with Fiber to The Node (FTTN) infrastructure in support of the new BLC being deployed. In an effort to minimize retained copper loop lengths, additional BLC nodes will be designed for installation either during initial placement of the FTTN facilities or in a subsequent Plan year. Fixed wireless will also be considered where such technology may be more economically feasible to meet the same objective. As this Plan is implemented all subscribers falling within the definition of 'reasonable request' will have access to broadband service at speeds defined by the FCC.

### **Plan Year 2015**

#### **DECKER EXCHANGE – MONTANA**

##### **ASH CREEK FIBER TO THE NODE CONSTRUCTION**

The Montana section of the Decker to Ash Creek Fiber Project includes new placement of approximately 2.93 route miles of fiber optic infrastructure. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. Direct buried cable placement method is planned for this project. The Ash Creek Electronic Serving Area Interface (ESAI) is located in Montana and serves a twelve (12) square mile area. It currently does not connect any premises in Montana but serves as the ESAI for fourteen (14) Wyoming connected premises. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

#### **DECKER EXCHANGE – MONTANA**

##### **TONGUE RIVER DAM FIBER TO THE NODE CONSTRUCTION**

The Tongue River Dam Fiber Project includes new placement of approximately 3 route miles of fiber optic infrastructure. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. Direct buried cable placement method is planned for this project. The Tongue River Dam Electronic Serving Area Interface (ESAI) connects eighteen (18) premises in a seventeen (17) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

#### **DECKER EXCHANGE – MONTANA:**

##### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Decker, MT Central Office and subtending remote electronics sites to serve Montana connected

premises. This project will not only support increased broadband capability within the Decker exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2015. Current copper plant service delivery to the subscribers will be retained. The Decker Central Office serves sixty nine (69) Montana premises in a seven hundred and ninety nine (799) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

#### **DECKER EXCHANGE - MONTANA SPRING CREEK HUT FIRE SUPPRESSION**

The project includes installation of a new fire suppression system at Spring Creek. Special concerns are this is a remote site that is sometimes very hard to get to and a Fire Suppression system is recommended. This site serves thirteen (13) connected premises but also serves as a regeneration/amplification site for middle-mile optical transport systems. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

#### **DECKER EXCHANGE – MONTANA KIRBY HUT FIRE SUPPRESSION**

The project includes installation of a new Fire Suppression system at Home Creek Butte. Special concerns are this is a remote site that is sometimes very hard to get to and a Fire Suppression system is recommended. This site serves twenty four (24) connected premises but also serves as a regeneration/amplification site for middle-mile optical transport systems. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

#### **ALZADA EXCHANGE - MONTANA ALBION FIBER TO THE PREMISE CONSTRUCTION**

This project includes the new placement of approximately 5 route miles of FTTP access infrastructure and new Broadband Loop Carrier (BLC) electronics which will replace first generation Digital Loop Carrier (DLC) currently in place and trunked with fiber. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new FTTP access infrastructure will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Direct buried cable placement method is planned for this project. The Albion Electronic Serving Area Interface (ESAI) connects nine (9) premises in a twenty one (21) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.



**ALZADA EXCHANGE - MONTANA****ALZADA HVAC EQUIPMENT REPLACEMENT**

This project includes the replacement of an aging heating and air conditioning system that is at or near life expectancy. This site serves sixty one (61) connected premises in a one thousand and eighty nine (1,089) square mile area. Anticipated funding for this project will be provided from general funds and completion of this project is within the 2015 calendar year.

**LAME DEER EXCHANGE - MONTANA****CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Lame Deer, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Lame Deer exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2015. Current copper plant service delivery to the subscribers will be retained. The Lame Deer Central Office serves five hundred and twelve (512) connected premises in a five hundred and forty nine (549) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**LAME DEER EXCHANGE – MONTANA****MUDDY CLUSTER GENERATOR ADDITION**

The project includes installation of a new emergency standby power generator to assure reliable delivery of broadband and voice services in the event of a commercial power failure. The Muddy Cluster site serves eighty three (83) connected premises in a twenty three (23) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**ASHLAND EXCHANGE - MONTANA****EAST FORK HUT GENERATOR ADDITION**

The project includes installation of a new emergency standby power generator to assure reliable delivery of broadband and voice services in the event of a commercial power failure. This site serves seventeen (17) in a twenty one (21) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**BIRNEY EXCHANGE - MONTANA****CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Birney, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Birney exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet

switch in 2016. Current copper plant service delivery to the subscribers will be retained. The Birney Central Office serves forty five (45) connected premises in a three hundred and thirty seven (337) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

#### **NORTH BROADUS EXCHANGE - MONTANA**

##### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the North Broadus, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the North Broadus exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The North Broadus Central Office serves sixty two (62) connected premises in a nine hundred and thirty six (936) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

#### **HYSHAM EXCHANGE - MONTANA**

##### **TULLOCK CREEK BUILDING REPLACEMENT**

This project will replace an existing equipment shelter that is beginning to collapse. The equipment shelter houses Digital Loop Carrier (DLC) equipment connecting seventeen (17) premises in a thirteen (13) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

#### **ASHLAND EXCHANGE - MONTANA**

##### **HOME CREEK BUTTE OFFICE POWER BOARD AND GENERATOR REPLACEMENT**

This project includes installation of a new Direct Current (DC) Power plant and emergency standby generator to replace an aging system that has reached its life expectancy. Special concerns in this project include keeping reliable Central Office DC and Backup Power to maintain operation of all local transport and access services. This new power system and standby generator will assure reliable delivery of broadband and voice services in the event of a commercial power failure. This site serves several wireless radio communications systems for both private, local government and law enforcement use. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.



**ASHLAND EXCHANGE - MONTANA****HOME CREEK BUTTE OFFICE FIRE SUPPRESSION**

The project includes installation of a new Fire Suppression system at Home Creek Butte. Special concerns are this is a remote site that is sometimes very hard to get to and a Fire Suppression system is recommended. This site serves several wireless radio communications systems for both private, local government and law enforcement use. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**ALL EXCHANGE AREAS – MONTANA/WYOMING****TECHNICIAN SERVICE VEHICLES**

In 2015 Range plans to replace four (4) gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service vehicle replacements are estimated to cost \$28,750 each for a total of \$115,000 in 2015.

**Plan Year 2016****ASHLAND EXCHANGE - MONTANA****NORTH ASHLAND TO SOUTH MILES CITY A-HUT FIBER TO THE NODE CONSTRUCTION**

This project includes new placement of approximately 18 route miles of fiber optic infrastructure to connect two Electronic Serving Area Interfaces (ESAI's). Direct buried cable placement method is planned for this project. The North Ashland Electronic Serving Area Interface (ESAI) connects thirteen (13) premises in a twenty two (22) square mile area and the South Miles City A-Hut connects seven (7) premises in a twenty (20) square mile area. The fiber construction will also provide route diversity between the two exchanges in subsequent plan years. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**ASHLAND EXCHANGE - MONTANA****FORT HOWE FIBER TO THE NODE CONSTRUCTION**

This project includes new placement of approximately 23.3 route miles of fiber optic infrastructure to connect existing Digital Loop Carrier (DLC) electronics. Direct buried cable placement method is planned for this project. The Fort Howe Electronic Serving Area Interface (ESAI) connects twenty three (23) premises in a twenty four (24) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

#### **ASHLAND EXCHANGE - MONTANA**

##### **EAST FORK AND HOME CREEK FIBER TO THE NODE CONSTRUCTION**

This project includes new placement of approximately 23.7 route miles of fiber optic infrastructure to connect the East Fork Electronic Serving Area Interface (ESAI), and a microwave site at Home Creek. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. The East Fork ESAI connects eleven (11) premises in a nineteen (19) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

#### **ASHLAND EXCHANGE - MONTANA**

##### **DOUBLE E FIBER TO THE NODE CONSTRUCTION**

This project includes new placement of approximately 3 route miles of fiber optic infrastructure to connect the Double E Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. The Double E ESAI connects fifteen (15) premises in an eight (8) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

#### **ASHLAND EXCHANGE - MONTANA**

##### **NORTH ASHLAND FIBER TO THE NODE CONSTRUCTION**

This project includes new placement of approximately 18 route miles of fiber optic infrastructure to connect the North Ashland Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. The North Ashland ESAI connects thirteen (13) premises in a twenty two (22) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

#### **ASHLAND EXCHANGE - MONTANA**

##### **ASHLAND-LAME DEER DIVIDE FIBER TO THE NODE CONSTRUCTION**

The Ashland-Lame Deer Divide FTTN project includes new placement of approximately .5 route miles of fiber optic infrastructure to connect a new Electronic Serving Area Interface (ESAI) on



the Northern Cheyenne Indian Reservation. The new Ashland-Lame Deer Divide ESAI will connect twenty (13) premises in a twenty five (25) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

#### **ASHLAND EXCHANGE – MONTANA**

##### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Ashland, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Ashland exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The Ashland Central Office serves two hundred and fifty six (256) connected premises in a one thousand four hundred and twenty three (1,423) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

#### **LAME DEER EXCHANGE - MONTANA**

##### **BIRNEY DIVIDE FIBER TO THE NODE CONSTRUCTION**

The Birney Divide FTTN project includes new placement of approximately 4.75 route miles of fiber optic infrastructure and electronics to establish a new Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The new Birney Divide ESAI will connect twenty (20) premises in a thirty one (31) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

#### **LAME DEER EXCHANGE - MONTANA**

##### **BURNS TRAILER COURT FIBER TO THE NODE CONSTRUCTION**

The Burns Trailer Court FTTN project includes new placement of approximately .45 route miles of fiber optic infrastructure and electronics to an existing Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The ESAI connects twenty five (25) premises in a thirteen (13) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.



**RANGE TELEPHONE COOPERATIVE-ALL EXCHANGES  
TECHNICIAN SERVICE TRUCK VEHICLES**

In 2016 Range plans to replace four ¾ ton gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service truck replacements are estimated to cost \$28,750 each for a total of \$115,000 in 2016.

**Plan Year 2017**

**SOUTH BROADUS EXCHANGE - MONTANA  
AC POWER TO NORTH NORTH BOYES ACCESS CARRIER SITE**

This project includes the construction of a new AC commercial power line to the North-North Boyes Electronic Serving Area Interface (ESAI) which is currently remote powered. The North-North Boyes ESAI connects three (3) premises in a fifty (50) mile area. Expected completion of this project is within the 2017 calendar year.

**BUSBY EXCHANGE - MONTANA  
BUSBY WEST FIBER TO THE NODE CONSTRUCTION**

The Busby West FTTN project includes new placement of approximately 9 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The new Busby West ESAI will connect eight (8) premises in a thirty one (31) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.

**BUSBY EXCHANGE - MONTANA  
GEORGE HAMMOND FIBER TO THE NODE CONSTRUCTION**

The George Hammond FTTN project includes new placement of approximately 12 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI) known as Busby #2 on the Northern Cheyenne Indian Reservation. New fiber access facilities will be constructed to replace a wireless radio and connect seven (7) premises in a two (2) square mile area where no broadband access currently exists. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the

engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.

#### **BUSBY EXCHANGE - MONTANA**

##### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Busby, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Busby exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The Busby Central Office serves one hundred and sixty two (162) connected premises in a five hundred and twenty five (525) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.

#### **SOUTH MILES CITY EXCHANGE - MONTANA**

##### **TONGUE RIVER ROAD FIBER TO THE NODE CONSTRUCTION**

The Tongue River Road FTTN project includes new placement of approximately 10 route miles of fiber optic infrastructure and electronics to establish a new Electronic Serving Area Interface (ESAI). The new Tongue River Road ESAI will connect eighteen (18) premises in a thirty five (35) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017calendar year.

#### **ROSEBUD EXCHANGE - MONTANA**

##### **NORTH ROSEBUD FIBER TO THE PREMIES CONSTRUCTION**

The North Rosebud FTTN project includes new placement of approximately 48 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI). The North Rosebud ESAI connects ninety six (96) premises in a twenty (20) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017calendar year.

#### **RANGE TELEPHONE COOPERATIVE-ALL EXCHANGES**

##### **TECHNICIAN SERVICE TRUCK VEHICLES**

In 2017 Range plans to replace four ¾ ton gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the



mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service truck replacements are estimated to cost \$28,750 each for a total of \$115,000 in 2017.

## **Plan Year 2018**

### **ROSEBUD EXCHANGE - MONTANA**

#### **NORTH ROSEBUD EAST FIBER TO THE NODE CONSTRUCTION**

The North Rosebud East FTTN project includes new placement of approximately 13 route miles of fiber optic infrastructure and electronics to a new Electronic Serving Area Interface (ESAI). The North Rosebud East ESAI connects twenty one (21) premises in a twenty four (24) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2018 calendar year.

### **RANGE TELEPHONE COOPERATIVE-ALL EXCHANGES TECHNICIAN SERVICE TRUCK VEHICLES**

In 2018 Range plans to replace four ¾ ton gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service truck replacements are estimated to cost \$29,000 each for a total of \$116,000 in 2018.

## **Plan Year 2019**

### **DECKER EXCHANGE - WYOMING**

#### **DECKER TO YOUNGS CREEK FIBER TO THE NODE CONSTRUCTION**

The Youngs Creek FTTN Project includes new placement of approximately 4 route miles of fiber optic infrastructure and new Broadband Loop Carrier (BLC) electronics. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Broadband Loop Carrier (BLC) facilities in this area. The FTTN node will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Direct buried cable placement method is planned for this project. The Youngs Creek Electronic Serving Area Interface (ESAI) will connect four (4) premises in a twenty two (22) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2019 calendar year.

### **HYSHAM EXCHANGE - MONTANA**

#### **HYSHAM WEST AND EAST FIBER TO THE PREMISE CONSTRUCTION**

This project includes the new placement of approximately 58 route miles of FTTP access infrastructure and new Broadband Loop Carrier (BLC) electronics. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new FTTP access infrastructure will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Direct buried cable placement method is planned for this project. The Hysham West and East ESAI's connect one hundred and sixteen (116) premises in a thirty four (34) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2019 calendar year.

#### **SOUTH MILES CITY EXCHANGE - MONTANA**

##### **A HUT TO T HUT FIBER TO THE PREMISE CONSTRUCTION**

This project includes the new placement of approximately 9.5 route miles of FTTP access infrastructure and new Broadband Loop Carrier (BLC) electronics. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new FTTP access infrastructure will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Direct buried cable placement method is planned for this project. The A-Hut and T-Hut ESAI's connect nineteen (19) premises in a twenty (20) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2019 calendar year.

#### **RANGE TELEPHONE COOPERATIVE-ALL EXCHANGES**

##### **TECHNICIAN SERVICE TRUCK VEHICLES**

In 2019 Range plans to replace four ¾ ton gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service truck replacements are estimated to cost \$30,000 each for a total of \$120,000 in 2019.